

**DEPARTMENT OF THE AIR FORCE  
TECHNICAL ORDER**

TO 31P1-4-108-545  
DATA CODE: 3117796  
1 February 1998  
Rescission date: 1 June 1999

# **RETROFIT OF RADAR DATA ACQUISITION TO INSPECT AND REPLACE THE RECEIVER PROTECTOR AND INSTALL FRONT END ELECTROMAGNETIC INTERFERENCE (EMI) FILTER. WSR-88D DOPPLER METEOROLOGICAL RADAR.**

## **NOTE**

Military Commanders are responsible for bringing this technical order to the attention of all maintenance personnel cleared for access of affected system.

### **1. APPLICATION.**

1.1 Identification. This TCTO is applicable to the following WSR-88D RDA sites:

Altus AFB, OK	Eglin AFB, FL	Keesler AFB, MS
Keesler AFB, MS	Keesler AFB, MS	Edwards AFB, CA
Andersen AFB, GU	Dover AFB, DE	Maxwell AFB, AL
Ft Hood, TX	Vandenberg AFB, CA	Dyess AFB, TX
Ft Campbell, KY	Laughlin AFB, TX	Ft Rucker, AL
Vance AFB, OK	Robins AFB, GA	Cannon AFB, NM
Ft Polk, LA	Minot AFB, ND	Columbus AFB, MS
Holloman AFB, NM	Moody AFB, GA	Beale AFB, CA
Kadena AB, OKI	Camp Humphreys, ROK	Kunsan AB, ROK
Lajes AB, AZS	Ft Drum, NY	

1.2 Kit Applicability by Model and Serial Number. Not applicable.

1.3 Proofing. Kit proofing was accomplished at WSFO Phoenix, AZ and WSO Flagstaff, AZ.

### **2. PURPOSE.**

The purpose of this Routine TCTO is to inspect and replace the receiver protector to standardize and remove all instances of an optional flange located on the receiver protector. In addition, to install an EMI preselect bandpass filter in the radar pedestal between the receiver protector and the low noise amplifier to reduce system susceptibility to interference from external sources. The authority for this TCTO is ECP F0032R00A00.

**Distribution Statement A - Approved for public release; distribution is unlimited.**

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### 3. WHEN TO BE ACCOMPLISHED.

Not later than 60 days after receipt of TCTO and kit. Failure to accomplish the work by expiration of compliance period or 60 days prior to rescission date shall be justification for withdrawing the affected system from service until compliance is accomplished.

### 4. BY WHOM TO BE ACCOMPLISHED.

Organizational level personnel will accomplish this modification.

### 5. WHAT IS REQUIRED.

#### 5.1 Supply-Information and Requirements.

5.1.1 Kits/Parts/Material Required. The following parts make up the kit for this modification.

***The OSF Logistics Section will direct ship the required kit(s) to the NEXRAD maintenance facility at no cost.***

<u>Nomenclature</u>	<u>Part No.</u>	<u>NSN</u>	<u>QTY</u>
Bracket, Filter	2310003-301	5340-01-437-0675	01
Bracket, Low Noise Amp	2100000-101	5340-01-436-8717	01
Cable Assy, 2W900	2200011-201	5995-01-436-8722	01
Adapter, Conn, Coax, RF	M55339/05-00057	5935-00-539-0851	01
Screw, Cap, Hex HD, CRE	MS35308-305	5305-00-688-2020	01 hd
Washer, Lock-Spring	MS35338-139	5310-00-933-8121	01 hd
Washer, Flat	MS15795-810	5310-00-582-5677	01 hd
Screw, Machine Pan	MS51958-64	5305-00-059-3660	01 hd
Washer, Lock-Spring	MS35338-138	5310-00-933-8120	01 hd
Washer, Flat	MS15795-808	5310-00-619-1148	01 hd
Screw, Machine Pan	MS51957-23	5305-00-054-5657	01 hd
Washer, Flat	MS15795-803	5310-00-595-6211	01 hd
Washer, Lock-Spring	MS35338-135	5310-00-933-8118	01 hd
Nut, Plain, Hexagon	MS35649-244	5310-00-934-9748	01 hd
Preselect Bandpass filter	2200010-xxx (site dependent on frequency used, see following list):		

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<u>Site</u>	<u>Frequency</u>	<u>Part No.</u>	<u>NSN</u>	<u>QTY</u>
Moody AFB, GA	2715 MHz	2200010-204	5915-01-436-4216	01
Altus AFB, OK	2710 MHz	2200010-203	5915-01-433-4213	01
Eglin AFB, FL	2705 MHz	2200010-202	5915-01-433-4205	01
Keesler AFB, MS (maint. tng.)	2855 MHz	2200010-232	5915-01-436-7246	01
Keesler AFB, MS (ops. tng.)	2870 MHz	2200010-235	5915-01-436-7250	01
Keesler AFB, MS (maint. tng.)	2886 MHz	2200010-240	5915-01-436-7262	01
Edwards AFB, CA	2922 MHz	2200010-260	5915-01-436-8696	01
Andersen AFB, GU	2705 MHz	2200010-202	5915-01-433-4205	01
Dover AFB, DE	2875 MHz	2200010-236	5915-01-436-7257	01
Maxwell AFB, AL	2890 MHz	2200010-243	5915-01-436-7276	01
Ft Hood, TX	2890 MHz	2200010-243	5915-01-436-7276	01
Vandenberg AFB, CA	2890 MHz	2200010-243	5915-01-436-7276	01
Dyess AFB, TX	2705 MHz	2200010-202	5915-01-433-4205	01
Ft Campbell, KY	2855 MHz	2200010-232	5915-01-436-7246	01
Laughlin AFB, TX	2730 MHz	2200010-208	5915-01-436-3241	01
Ft Rucker, AL	2865 MHz	2200010-234	5915-01-436-7249	01
Ft Drum, NY	2885 MHz	2200010-239	5915-01-436-7263	01

<u>Site</u>	<u>Frequency</u>	<u>Part No.</u>	<u>NSN</u>	<u>QTY</u>
Vance AFB, OK	2895 MHz	2200010-254	5915-01-436-8683	01
Robins AFB, GA	2875 MHz	2200010-236	5915-01-436-7257	01
Cannon AFB, NM	2885 MHz	2200010-239	5915-01-436-7263	01
Ft Polk, LA	2850 MHz	2200010-231	5915-01-436-7245	01
Minot AFB, ND	2895 MHz	2200010-254	5915-01-436-8683	01
Columbus AFB, MS	2875 MHz	2200010-236	5915-01-436-7257	01
Holloman AFB, NM	2860 MHz	2200010-233	5915-01-436-7247	01
Beale AFB, CA	2870 MHz	2200010-235	5915-01-436-7250	01
Kadena AB, OKI	2800 MHz	2200010-221	5915-01-436-6513	01
Camp Humphreys, ROK	2922 MHz	2200010-260	5915-01-436-8696	01
Kunsan AB, ROK	2913 MHz	2200010-259	5915-01-436-8690	01
Lajes AB, AZS	2710 MHz	2200010-203	5915-01-433-4213	01

5.1.2 Action Required on Items in Stock. Not applicable.

5.1.3 Kits/Parts/Material Required to Modify Items in Stock. Not applicable.

5.1.4 Disposition of Removed and Replaced Parts/Material. Retain old low noise amplifier mounting bracket and fasteners. If the new filter fails, the radar can be brought back to its original configuration. Receiver Protector, part number AMC0851, need to be returned to the NRC. Mark Reparable Tag and AFTO Form 350 with:

NSN, Part Number, Noun, and condition code "F"

For Remarks, put "Part returned for modification per TCTO 31P1-4-108-545."

Ref: AFM 67-1, Vol 1, Part 2, Chap 3, para 14a

## TO 31P1-4-108-545

Have Base Supply and transportation expedite asset(s) using Transportation Priority 1 (TP1) shipment to:

DODAAC 136453  
National Reconditioning Center  
1520 East Bannister Road  
Kansas City, MO 64131

5.1.5 Drawings and Instructions Required. Not applicable.

5.1.6 Size and Weight of Kits/Parts/Materials. Size, weight, and cost are estimated.

<u>Size</u>	<u>Weight</u>	<u>Cost</u>
6 in x 12 in X 20 in	10 lbs	\$1350.00

5.1.7 Disposition of Kits/Parts/Materials. Not applicable.

5.2 Personnel Information and Requirement. The personnel performing this task will have maintenance and test experience with the WSR-88D RDA. One technician is required for this procedure.

<u>Work Phases</u>	<u>AFSC Skills</u>	<u>Man-Hours</u>
Unpacking	2E051	0.01
Disassembly	2E051	1.50
Installation	2E051	1.50
Assembly	2E051	0.50
Operational Check	2E051	0.49
Total Man-Hours	4.00	

5.3 Special Tools and Fixtures Required. Not applicable.

6. HOW WORK IS ACCOMPLISHED. Refer to attachment 1.

7. SUPPLEMENTAL INFORMATION.

7.1 Fuel System Defuel/Purge. Not applicable.

7.2 Operational Checkout Requirements. Refer to attachment 1.

7.3 Weight and Balance Information. Not applicable.

7.4 Technical Manuals Affected.

<u>Technical Manual</u>	<u>Date</u>
31P1-4-108-4 (EHB 6-501)	1 Aug 96
31P1-4-108-152 (EHB 6-510)	1 May 96

8. RECORDS.

8.1 Action Required on Maintenance Records.

- a. Air Force and Army sites update the AFTO Form 95 to show compliance.
- b. Air Force and Army sites report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.
- c. Navy and Marine Corps sites complete the appropriate sections of form OPNAV 4790/CK IAW OPNAVINSTN 4790-4B, Ships Maintenance and Material Management (3-M) Manual. Send the completed form to your Type Commander (TYCOM).
- d. All sites complete attachment 2 and forward to:

System Support Branch, Logistics Section  
Operational Support Facility  
3200 Marshall Ave, Suite 101  
Norman, OK 73072-8028

Fax number: (405) 366-6553

Or e-mail information to:

logistics@osf.noaa.gov

8.2 Action Required on Supply Records. Not applicable.

8.3 Modification Markings. Not applicable.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

MICHAEL E. RYAN, General, USAF  
Chief of Staff

//SIGNED//

Edward L. Berkowitz, Chief  
System Support Branch  
Operational Support Facility  
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